

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of

Chin-Sung Liu, et al.

Serial No. 09/711,524

Filed: November 14, 2000

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Group Art Unit: 2834

Examiner: B. S. Mullins

For: ELECTROMAGNETIC ACTUATOR HAVING SPECIAL COIL ARRANGEMENT
FOR IMPROVING UTILIZATION RATE OF MAGNETIC CIRCUIT THEREFOR

AMENDMENT

ASSISTANT COMMISSIONER FOR PATENTS
Washington, D.C. 20231

Dear Sir:

In response to the Office Action dated October 1, 2002, please amend the application as follows.

IN THE DRAWINGS

Please amend the drawings as shown in red on the attached sheets.

IN THE SPECIFICATION

Please amend the specification as follows.

Page 4, delete last paragraph (lines 14-27) continuing onto page 5, lines 1-3 and replace as follows:

--According to a second aspect of the present invention, an electromagnetic actuator is provided for moving an object along a first direction and a second direction. The electromagnetic actuator includes a magnetic force line generator including two homopolar parts spaced with a clearance small enough for generating magnetic force lines including a first substantially linear portion and a second substantially linear portion due to a repelling force between the two homopolar parts, wherein the first and second substantially linear portion are not parallel; a first actuating coil set connected to the object and arranged around the magnetic force line generator with a coil wall thereof substantially perpendicular to the first substantially linear portion for moving the object in the first direction in response to a